DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-002709
Date Inspected: 26-May-2008

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 630
OSM Departure Time: 1530
Location: Shanghai, China

CWI Name: Li Zhijiang and Hu Wei Qing

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG and SAS Tower Fabrication

Summary of Items Observed:

On this date, Caltrans Office of Structural Material (OSM) Quality Assurance (QA) Inspector Joselito Lizardo was present as requested to perform observations on the fabrication of Orthotropic Box Girder (OBG) and SAS Tower at Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China.

The QA Inspector has randomly observed the following activities on these Bays mentioned below;

Bay 7-OBG - Floor Beam Sub Assembly:
QA Inspector J. Lizardo randomly observed ZPMC qualified welder Mr. Liu Longxian ID #044786 welding CJP on skewed gusset plate connector to floor beam bottom flange. Mr. Liu was observed welding in the 3G (vertical) position utilizing a flux corded arc welding (FCAW) process with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H, semi automatic at sub-assembly SSD12A-PP022-007. QA Inspector J. Lizardo observed the ZPMC QC CWI Inspector Hu Wei Qing verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector observed preheat and welding parameters measured by the QC CWI Inspector Hu Wei Qing to be: welding parameters amps of 214 , volts of 26. 4, a travel speed of 116 mm/min. Welding parameters observed by QA Inspector J. Lizardo appear to be in general compliance with the approved WPS-B-T-2233-TcU4b-F.

This QA Inspector randomly observed qualified welder Hong Shuli ID# 044815 welding CJP on floor beam flange splice butt joint. Welder Hong was observed welding in the 3G (vertical) position utilizing a flux corded arc welding (FCAW) process with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H, semi automatic at sub-assembly FB003-046-104. The welding parameters measured by ZPMC QC Zhan Haifeng were

209Amps, 25.7Volts and 118mm/min travel speed, which appear to be in compliance with the approved WPS-B-T-2233-B-U2-F. FCAW fillet welding on stiffener plates to web and flange, web to flange on floor beam sub-assemblies FB003-0380978/077, FB003-049-004 and FB003-055-004 were continuing and being monitored by ZPMC QC/CWI this QA Inspector observed.

On separate location, one tack weld was noted with crack by ZPMC QC. This QC called the attention of QA J. Lizardo to witness the removal of the crack. Upon arrival at the scene, this QA observed the tack weld was already been ground removed. Then the QC told this QA to witness the MT on the removal but the time would be 1500hr, which already beyond work time duty. Due to time constraint, QA J lizardo turned this over to task leader Jim Cochran.

The QA Inspector randomly observed ZPMC welder Huang Xin Lao ID Number 044780, utilizing the SAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2221-L2c-F-1, to weld the fill and cover pass on butt splices of floor beam web plate of uneven thickness of 14mm to 18mm on Floor Beam Diaphragm Web Sub-Assembly FB008-002-079. The QA Inspector randomly observed ZPMC QC Yang Ding, monitoring weld parameters. Fit up of this same weld joint was also done on floor beams FB040-001-079 and FB027-002-101 by qualified welder Ren Zongbin ID# 067037.

Bay 8: Tower Diaphragms
The QA Inspector randomly observed ZPMC welder Xu Pei Pei ID Number 050323, utilizing the SAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-3221-B-U3c-S-1, to weld the fill pass on plate butt splices of Tower Diaphragm SSD1-SA248-1B/2B. The QA Inspector randomly observed ZPMC CWI Li Zhijiang, monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 590 amps, 30.8 volts with a travel speed of 470 mm per minute. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Xiao Wen Yuan ID number 058482, utilizing the FCAW Process in the 3G (Vertical Groove) Position with ZPMC WPS WPS-B-T-2233-B-U3-F, to weld groove splice butt joint on Tower Diaphragm ring Sub-Assembly SSD1-SA326 weld number 10B. The QA Inspector randomly observed ZPMC CWI Lvliqing monitoring weld parameters. The weld parameters observed were 212Amps, 26. 0Volts and 114 mm/min travel speed, which appeared to comply with contract requirements. Other activities observed that are related to welding include bevel cutting of bent heavy plates for tower diaphragm ring and flush grinding on cover of completed weld of diaphragm ring ESD1-SA309-10A.

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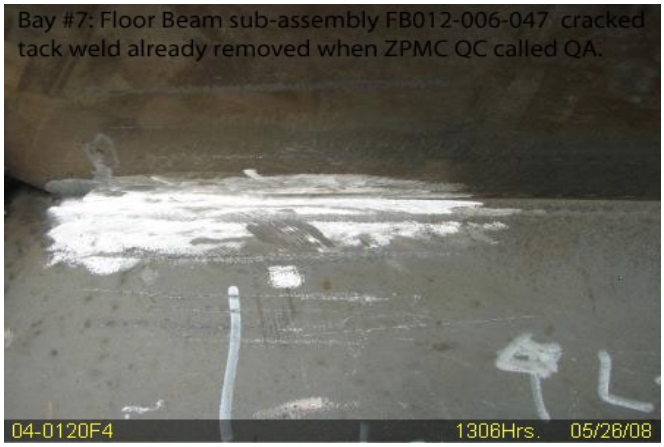

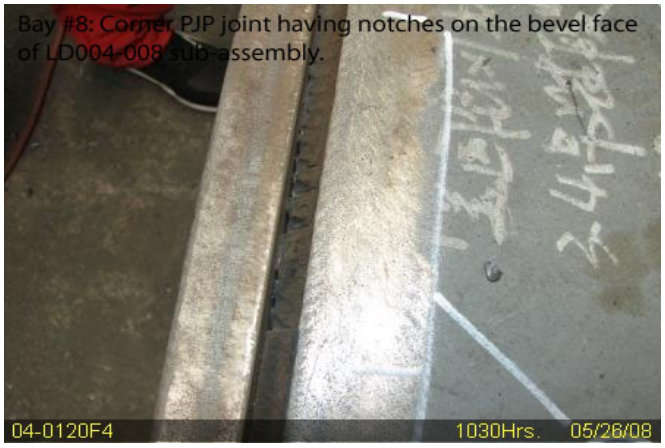

Summary of Conversations:

No significant conversation ocurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Cochran,Jim	QA Reviewer